

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-3 and 6-10 are presently active in this case, Claim 1 having been amended and Claims 4 and 5 having been canceled without prejudice or disclaimer by way of the present Amendment.

The Applicants are submitting herewith a copy of relevant information about ASUWAN, including a printout of the website listed in the original specification and an English translation thereof.

The disclosure was objected to because it contained an embedded hyperlink and/or other form of browser-executable code. The specification has been amended to delete the embedded hyperlink and/or other form of browser-executable code. Accordingly, the Applicants request the withdrawal of the objection to the disclosure.

Claims 1-10 were rejected under 35 U.S.C. 103(a) as being unpatentable over Appleton et al. (U.S. Patent No. 3,606,295) in view of Inoue et al. described on page 2 of the present application. For the reasons discussed below, the Applicants request the withdrawal of the obviousness rejection.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP 2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or

suggest all of the claim limitations. The Applicant submits that a *prima facie* case of obviousness has not been established in the present case because the references, either taken singularly or in combination, do not teach or suggest all of the claim limitations.

Claim 1 of the present application recites a shock absorber comprising a housing having at least one hollow formed therein, formed of a rigid material, and fixed to a bone structural member of vehicles, and a shock-energy absorbing member disposed in the hollow of the housing at least, and formed of a super plastic polymer material exhibiting a tensile breaking elongation of 200% or more, a yield strength of 20 MPa or more with respect to a predetermined strain and a tensile elastic modulus of 400 MPa or more. The shock-energy absorbing member has a surface at least, where the surface facing a shock input direction and disposed in a manner contacting closely with an inner surface of the housing. The shock-energy absorbing member is pre-compressed in a shock input direction within the housing.

The Appleton et al. reference describes a shock absorber adapted for vehicle suspension systems including a stack of non-porous elastomeric discs lying one on the other and an axially extending bore through the stack filled with a flexible plastic foam that joins the discs together into a unitary structure. The discs are provided in a container in a non-compressed state. The discs are configured to expand radially under load towards the wall of the container. As depicted in Figure 2, a space (S) is provided between the discs and the walls of the container in order to allow for that expansion. However, the discs are not pre-compressed within the container.

Claim 1 of the present application advantageously recites a shock-energy absorbing member has a surface at least, where the surface facing a shock input direction and disposed

in a manner contacting closely with an inner surface of the housing. Claim 1 further recites that the shock-energy absorbing member is pre-compressed in a shock input direction within the housing. As noted above, the Appleton et al. reference does not disclose such features. The discs of the Appleton et al. reference are not disposed in a manner contacting closely the inner surface of the container, and the discs are not pre-compressed in a shock input direction within the container. With the structure of the Appleton et al. reference, it is unnecessary to compress the shock absorbing structure within a housing. To the contrary, in the present invention, in order to utilize the ability of the shock-energy absorbing member, such as ASUWAN, to the fullest extent, the shock-energy absorbing member is constructed in such a manner that the housing is compressed to contact closely with the shock-energy absorbing member, thereby exhibiting an energy-absorbing effect effectively to an initial variation rate. The shock-energy absorbing member of the present invention is hard molding, not a porous elastic body such as conventional urethane foam.

The Applicants further submit that the discussion of Inoue et al. on page 2 of the present application does not supplement the deficiencies in the teachings of the Appleton et al. reference set forth above. Accordingly, the Applicants respectfully submit that a *prima facie* case of obviousness cannot be established with respect to Claim 1, and therefore the Applicants request the withdrawal of the obviousness rejection of Claim 1.

Furthermore, the Applicants note that the characteristics of shock resistance feature and a shock-energy absorbing feature are different from each other. (See, e.g., page 2, line 24, through page 3, line 4, of the present application.) For example, if only shock resistance is important, then a rubber plate can be used as a shock-energy absorbing member, and due to

this, it is possible to suppress the phenomenon such as breaking or crack satisfactorily. Namely, only if shock resistance has viscosity, an appropriate effect is expected. However, as for shock-energy absorption, this is different matter. In other words, in order to absorb shock energy, a shock-energy absorbing member has to be deformed when the pressure is applied by shock input, but if the stress (the degree of stress is compared by pressure in the specification) is not high at the time of deformation, then an amount for absorbing energy does not increase. If the shock-energy absorbing member is hard, such as an iron plate, then the stress at the time of deformation is high, but the member is not actually deformed, so a large amount of energy absorption is not obtained.

Regarding Claim 3, materials such as "ASUWAN" have the most suitable properties for absorbing shock energy such that they are lightweight and can be largely deformed when high stress is applied at the time of deformation. The inventors of the present application discovery such characteristics, which were not expected by Inoue et al. for ASUWAN. The present invention recited in Claim 3, in which the properties of ASUWAN are used most suitably, is not obvious to one of ordinary skill in the art. The Applicants submit that it is very difficult to apply ASUWAN for use as a shock-energy absorbing member, as in the present invention such as in Claim 3.

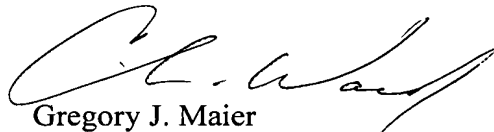
Claims 2, 3, and 6-10 are considered allowable for the reasons advanced for Claim 1 from which they depend. These claims are further considered allowable as they recite other features of the invention that are neither disclosed, taught, nor suggested by the applied references when those features are considered within the context of Claim 1.

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Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Registration No. 25,599
Attorney of Record

Christopher D. Ward
Registration No. 41,367

Customer Number

22850

Tel. (703) 413-3000
Fax. (703) 413-2220
(OSMMN 10/01)

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